Environmental Quality Office
Environmental and Safety Engineering

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February 14, 2005

Mr. Art Williams
Director
Louisville Metro Air pollution Control District
850 Barret Avenue
Louisville, Kentucky 40204-1745

Subject: Proposed Strategic Toxic Air Reduction (STAR) Program Regulations

Dear Mr. Williams:

On behalf of Ford Motor Company, attached are comments regarding the package of proposed regulations referred to as the Strategic Toxic Air Reduction (STAR) Program. Ford operates two manufacturing facilities that would be subject to the proposed regulations, Kentucky Truck and Louisville Assembly Plants. Our evaluation indicates that both facilities will be unable to achieve all of the proposed requirements and the continued viability of both is affected. The STAR Program presents a technically flawed strategy for controlling toxic air emissions in Louisville. Substantive, not cosmetic changes to the proposal are needed, even if that requires additional public review.

The attached comments explain our concerns and propose changes to address several of the more problematic provisions of the STAR Program. Greater Louisville, Inc. (GLI) on behalf of a multi-stakeholder group has similarly prepared comments and proposed changes to correct some of the technical issues associated with the proposed regulations. The GLI proposal presents a tough, but fair rule package that would require significant facility actions and drive reduction in toxic air emissions in Louisville. Importantly, the GLI proposal is achievable and protective of public health and welfare. Ford supports and incorporates the GLI comments and recommendations.

Both the Ford and GLI comments are intended to preserve the STAR Program structure and intent while addressing technical deficiencies. With both the Ford and GLI corrections incorporated, the STAR program would represent the most stringent air toxic rules we are aware of in the U.S. and Canada. Considerable excess administrative burden would remain that will do nothing to advance air toxic reduction or control. We continue to urge a truly interactive multi-stakeholder process to address necessary structural changes to the program that are needed to make the proposal an effective and efficient air toxic program.

As corporate citizens of Louisville representing two major manufacturing facilities and thousands of employees we have a vested interest in achieving and maintaining clean air while assuring economic vitality, in effect a sustainable program. We stand ready to join in multi-stakeholder discussions leading to appropriate air toxic regulation.

Sincerely,

/original signed 2-14-2005/

Dennis J. Karl
Manager
Regulatory Policy Group

cc: Mr. B. Traughber, Cabinet Secretary
Mr. G. Ladden, KTP Mgr
Mr. J. Bobnar, LAP Mgr.
Mr. Jonathan L. Trout, Secretary-Treasurer, LMAPCB

Ford Motor Company Comments Regarding
Louisville Metro APCD Proposed Rules under the STAR Program
February 14, 2005

Regulation 1.02 Definitions

Rule: 1.3 Malfunction is being revised to mean "the failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner that causes**, or is likely to cause,** emissions that exceed an applicable emission standard. {Emphasis added.}

Comment: In response to comments on the first draft, the proposed revision was changed to be less broad in scope. However, the use of the terms "is likely to cause" is still too broad as it would require reporting of equipment failures that do not cause, or are even believed to have caused, an emission exceedance. Clearly only those failures that actually cause (or based on the limited information available at the time of the failure are believed to have caused) an emission exceedance should be reportable. Therefore, the terms "is likely to cause" should be changed to "is believed to have caused."

Rule: 1.30 Excess Emissions is defined to mean "emissions that exceed an applicable emission standard….If there is not an applicable emission standard for a toxic air contaminant established pursuant to Regulation 5.21 *Environmental Acceptability for Toxic Air Contaminants*, then, for the purpose of the notification and reporting requirements of Regulation 1.07 *Excess Emissions During Startups, Shutdowns, and Malfunctions*, excess emissions shall also mean emissions that exceed 125% of the reported actual maximum hourly emission rate of a toxic air contaminant that results from a startup, shutdown, or malfunction."

Comment: Excess emissions should be defined as only those air contaminant emissions that exceed an established applicable emission rate limit. In the response to comments on the first draft of the rules, it was not explained as to why it is appropriate to classify other emissions, those for which there is no currently established applicable emission standard, with emissions that are subject to standards for purposes of submitting "excess emission" reports. Rather, it was stated that such action would be "only temporary." It would be inappropriate to consider an emission above a reported maximum value as a violation unless it is also an exceedance of an established emission limit or standard. It is further inappropriate to establish an applicable emission standard for every air toxic contaminant emitted as many will likely be emitted well below any level of concern. For example, consider the hypothetical emission of "di-ethyl-something." Presume it has a maximum actual hourly emission of 0.01 and the potential hourly emission of 0.1 and an EAL of 10 pounds per hour. Justifiably, there should be no applicable emission standard, and certainly there should be no need to report an "excess emission" if emissions exceed 125% of the actual maximum hourly emission rate of 0.01.

In addition, only exceedances of federal applicable requirements should be "federally enforceable." Therefore, reporting requirements of exceedances of state or local applicable requirements should be clarified to state that they are "state-only" (or "District-only") enforceable.

Regulation 1.07 Excess Emissions During Startups, Shutdowns, and Malfunctions

General Comments: The proposed revisions to the reporting and response actions related to startups, shutdowns and malfunctions go beyond what is appropriate and necessary to protect public health and welfare. Time-based emission limits (pounds per hour or pounds per day) are designed to be protective of public health and welfare and assure attainment and maintenance of the national ambient air quality standards (NAAQS) for which US EPA has established its policies regarding these provisions. However, other standards, such as those designed to represent best available control technology (BACT) are not intended to directly relate to the time-based standards and do not necessarily cause or contribute to either health or NAAQS concerns. In fact, operation of processes during such equipment failures that continue to meet the pound per hour (or pound per day) limits while failing to achieve the BACT (or similar technology-based) standards are still protective of public health, welfare and the NAAQS. Therefore, the proposed number, timing and informational requirements of these notices of "excess emissions" to the agency seem overly burdensome and should be reduced. Especially for situations that do not pose a public health or welfare concern, only two reports should be necessary, one at the time of the event and one as follow-up to explain the circumstances and corrective action. Of note is that any excess emissions of federally applicable requirements will be reported again (redundant), as "deviations," by the Title V permitted facilities.

Without question, the APCD should be promptly notified of excessive emissions caused by startups, shutdowns and malfunctions that threaten public health and provided as much detail as needed so that the agency can assist in any appropriate response activities. Recognizing that such reports are also typically made to the National Response Center and/or to the local emergency response activities, there should be coordination within the agencies. On the other hand, notice of lesser "excess emissions," such as those that do not pose any threat to public health or welfare, but instead relate only to a technology-based limit, should not have the same rigorous notification requirements. In addition, submittal of two or more follow-up written reports providing additional detail and explanation is unnecessarily burdensome and may require more time to complete than provided in the proposal. As proposed, if more time is needed, then approval from APCD is required and such must be confirmed by the applicant in writing, thus requiring yet another written report. The reporting requirements should be commensurate with the potential public health threat and flexible to accommodate availability of information. And, only that information which is needed to determine corrective actions and whether changes to the program (SIP) are necessary should be required. Redundant reporting requirements should be eliminated.

With regard to affirmative defense for malfunctions, US EPA narrowly defines (through policy) what is permissible under this concept. Given the unique circumstances and "burden of proof" prescribed in these policies, the proposed rules should include provisions to accommodate an affirmative defense. It is noted that such accommodation does not preclude the APCD from taking any action it deems necessary to require additional measures to address any concerns, but it would formally acknowledge US EPA's view as reiterated in its September 20, 1999 policy memorandum that "even equipment that is properly designed and maintained can sometimes fail."

Time allotted for follow-up reporting must be flexible to accommodate the actual determinations as to whether an "excess emission" actually occurred. In the proposal, submittal of written reports are tied to the startup, shutdown and malfunction events themselves, typically within a prescribed number of days after the event ends. For emission standards that are based on monthly records and prorated to daily production/operation levels, a final determination as to whether compliance was achieved and, if not, the extent of any excess emission, will not typically be possible until the end of the month when the monthly measurements have been made and the computations have been performed. As a result, these written reports should be tied to the compliance determination date and not the event date. (See proposed rules 3.7, 3.8, 4.5 and 4.7.)

Section 2 Excess Emissions
Rule: 2.1 "The owner or operator of a process or process equipment has a general duty to ensure that the emissions from the process or process equipment are in compliance with all emission standards at all times. This includes starting up and shutting down the process or process equipment in a manner that the emissions are in compliance with all applicable emission standards and, consistent with safe operating procedures, stopping input feed to the process or process equipment and shutting down the process or process equipment if excess emissions would likely result from a malfunction."

Comment: In its response to comments pertaining to the first draft of this requirement, APCD stated that the "decision to shut down a process or process equipment if the emissions are likely to be in violation of an emission standard rests with the company, not the District. If excess emissions do occur, then the District will determine the appropriate enforcement action to take, based upon consideration of the factors included in section 2.3." Clearly companies do (and should) have a general duty to operate in compliance with the regulations and their permits. In recognition of the fact that despite best efforts and good maintenance, circumstances can arise to cause equipment to fail or malfunction, clarity, including the affirmative defense, should be provided to assure understanding as to how such consideration will be made. Both the regulated industry and community should understand what is expected when a company chooses to continue to operate a source under conditions when there is (or may be) an exceedance of an emission standard and there is no threat to public health or under conditions that may pose a threat. It is recognized that all potential events and circumstances cannot be pre-determined or pre-judged, and that there will always be

the need to have some case-specific determinations, but the rules should provide more clarity as to when the use of enforcement discretion will be appropriate and when it will result in action.

Rule: 2.3.5 "For a *malfunction*, whether the owner or operator, consistent with safe operating procedures, stopped input feed to the process or process equipment **and shut down the process or process equipment as soon as possible**, …" {Emphasis added.}

Comment: The proposed rule appears to establish the presumption that processes should be shut down as soon as possible under a malfunction event, even though there is no threat to public health, welfare or the NAAQS. Unless there is potential immediate threat of harm to public health, shutting down the process should not be considered a necessary or expected outcome of a malfunction condition. Emissions during a malfunction can be minimized or kept at levels that are still protective of public health. As a result, this criterion should be deleted entirely. At a minimum, it should be clarified that source shutdowns should only be expected when necessary to protect public health.

Section 4 Malfunction
*Rule: 4.*4 If excess emissions during a malfunction of a process or process equipment occur or are likely to occur, then the owner or operator of the process or process equipment shall comply with all of the following:
*Rule: 4.*4.1 Reasonable, available, and practical emission reduction measures, including process equipment design, operating procedures, pollution prevention measures, use of off-shift labor and overtime, and, consistent with safe operating procedures, **immediately stopping input feed to the process or process equipment and shutting down the process or process equipment**, shall be used to prevent or minimize excess emissions,
4.4.2 The frequency of operation of the process or process equipment in a malfunction mode shall be minimized to the maximum extent practicable **and the duration of operation of the process or process equipment in a malfunction mode shall be reduced as much as necessary to minimize excess emissions**,
4.4.3 A bypass of any related control equipment shall not occur unless necessary to prevent loss of life, personal injury, or severe property damage, **and the extent and duration of any bypass shall be reduced as much as necessary to minimize excess emissions, and**
4.4.4 All emission and parametric monitoring systems for the process or process equipment shall be operated unless technically infeasible." {Emphasis added.}

Comment: The expectation that equipment should be shut down immediately or as much as necessary when there is no environmental or public health impact is unnecessary. Consider an oxidizer used to control VOC emissions from a painting operation curing oven. Shutting down the oven would not necessarily reduce any VOC emissions that would be emitted during the malfunction of the oxidizer. Rather, if the vehicles have to be repainted or scrapped, more VOC emissions will be generated.

Thus, requiring the shutting down of the process or process equipment could yield higher total emissions and impact to the environment. This rule should be revised to simply require that excess emissions above emission standards should be minimized during malfunction events.

Rule: 4.6 "**As soon as reasonably possible, but no later than 2 hours after the excess emissions ended,** the owner or operator of the process or process equipment shall notify the District by telephone, facsimile, or electronic mail. If this notification is made by telephone, the owner or operator shall provide written notification by facsimile or electronic mail no later than 4 hours after the excess emissions ended." {Emphasis added.}

Comment: Notification within two hours after a malfunction has ended is onerous and unnecessary to protect public health. This section should be deleted, or at a minimum revised to allow for such notices to be provided by the end of the next regular work day (M-F).

Part 5 Regulations

General Comments: The new Part 5 regulations are intended to apply to toxic air contaminants in a regulatory approach that goes beyond the national approach, i.e., establish national emission standards for hazardous air pollutants and thus is strictly for the purposes of achieving state/local-specific goals. Therefore, the proposed rules should be identified as "state-only" (or "District-only") applicable in regard to enforceability. These new regulations are not (and should not be) considered federally enforceable. This general comment applies to all of the new Part 5 regulations proposed under the STAR program.

Taken together, the new Part 5 regulations appear to over-achieve the objective of providing clean air to safely protect public health and welfare. The proposed rules appear to establish some unsustainable and unachievable goals and standards that even minor sources will have difficulty in achieving. Public health and welfare is critical to sustainable growth and emission limits should be established and enforced in order to protect public health and welfare. However, establishing goals and objectives that are potentially several orders of magnitude more restrictive than necessary to protect public health and welfare is not good policy and is not sustainable or in the best interest in the public health and welfare of the community. To that end, the goals and approaches should be adjusted to represent that level that is needed to protect public health and welfare. Other agencies, such as the Agency for Toxic Substances and Disease Registry (ATSDR) have been created to advise state agencies and communities and US EPA as to the hazards and health impacts of exposure to hazardous substances based on a more holistic approach, albeit related to Superfund activities in this example. Of note is that the levels deemed "safe" or classified as "minimum risk levels" by ATSDR appear to be orders of magnitude higher than the proposed Environmentally Acceptable levels. In addition, exposure modeling provides a more holistic representation of true risk than the approaches outlined in the new

regulations. The regulatory goals should be more closely aligned with actual public health and welfare impact, while still being "safe".

Regulation 5.20 Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant

Rule: Proposed Regulation 5.20 provides mechanisms to determine whether a chemical (toxic air contaminant or TAC) is a carcinogen, establishes that an additional unit risk estimate (URE) of 1 in a million (in $\mu g/m^3$) is the "benchmark ambient concentration" (BAC_C) and lists mechanisms for determining the chronic benchmark ambient concentration (BAC_{NC}) of non-carcinogens. In addition, the rule specifies that the APCD can make determinations as to whether a chemical is a carcinogen.

Comment: With respect to making determinations under proposed Rule 2.14 as to whether a chemical should be classified as a carcinogen, APCD should avoid rendering such determinations. In the response to comments, the International Agency for Research on Cancer (IARC) was identified as the definitive source for information as to whether a chemical should be considered a carcinogen. However, federal agencies such as the US EPA and ATSDR also play key roles in these determinations and should be used. APCD should spend its limited resources determining whether there are local public health and welfare concerns regarding the chemicals identified and thoroughly reviewed by the agencies that are expert in this arena, and whether additional measures are required to address such local concerns. Therefore Rules 2.14 and 2.2 should be deleted.

Regulation 5.21 Environmental Acceptability for Toxic Air Contaminants

Comments: The proposed rule establishes goals and standards for point sources for individual and aggregate TACs for both new and existing processes and equipment. As proposed, the goals and standards are ultra-conservative as they rely on three distinct data-driven "tools" each of which have already been subjected to application of safety factors and margins to make them conservative independently. First of all, the maximum emission estimating tools required by proposed Rule 1.06 has the expectation of greatly over-estimating actual emissions. Second, the chemical hazard determination tools relied upon by proposed Rule 5.20 have built-in safety factors to account for uncertainties in the data; and it is well understood that these tools likely provide values that are orders of magnitude below the real "safe" levels. Third, the modeling tools listed in proposed Rule 5.22 each have built-in conservative estimating methodology and typically over-predict (versus under-predict) actual concentrations of materials. Application of these distinct tools together to generate a value to compare to target goals and standards listed in proposed Rule 5.21 compound each of the built-in conservative methodologies or safety factors to yield a result that is even more conservative than any of the individual results. Because this new value is so conservative, it is likely that it will be unachievable for some "clean" processes. Perhaps even individual homes, if subjected to this rigorous approach, would likely have

difficulty achieving the desired goals of proposed Rule 5.21 for some chemicals as proposed. For these reasons, the goals and standards should be adjusted upward, one or two orders of magnitude, as recently suggested by GLI. Such adjustment would make them more reasonable and remain very protective of public health and welfare. This would be more consistent with similar goals/acceptable levels as determined by other agencies such as ATSDR. Once APCD obtains the emission data and process configuration information from the various sources in the County, it could then perform further, more holistic evaluations; i.e., apply exposure modeling or employ the total risk integrated methodology (TRIM) approach, to determine if further local actions are appropriate.

Note that adjusting the goals upward is appropriate considering the various conservative approaches used in conjunction with one another. Equating acceptability to 10 (or more) in a million risk for carcinogens or suspected carcinogens and equating it to 1 (or more) of the 'hazard quotient" can account for some of the overly conservative estimates and safety factors built in. Then, when using ultra-conservative to very-conservative mathematical and modeling approaches (e.g., SCREEN3 and ISC3) to adjust the theoretical concentration impacts of "maximum" emission rates, further exaggeration of compounding these safety margins can in effect be reduced. Summation of effects and risks of separate carcinogens/chemicals should not be performed as it would stretch the thread of technical reasonableness beyond the breaking point. While some substances may have similar pathways and effects that toxicologists, health and medical professionals might be able to agree upon, it should not be the default determination that all substances exhibit additive effects. When all the computations are put together, significant overestimation of the potential impact is the likely result. In addition, attempting to establish best available technology for toxics (TBAT) based on welfare benefits is a difficult, if not impossible task.

Raising the goals and standards also allows alterations of existing processes and sources to use less toxic chemicals without deeming them "unacceptable" by exceeding overly-conservative EA values prescribed in the tables. Such a result is not in the best interest of community or the facility. Clearly, installation of cleaner, better technology sources should be encouraged, rather than be discouraged by application of these proposed rules. Existing source modifications to incorporate the federal MACT standards or to reduce more toxic TACs with less toxic TACs should be excluded from these analyses as is expected in other states. Combining different TACs (e.g., see Sections 2.2.3, 2.5.3 and 2.8.2) should not be performed except perhaps to demonstrate that improvement will occur when modifying an existing source/facility.

Regulation 5.22 Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant

Comment: It is recognized that the modeling approaches are based on US EPA methodology. It is also understood that the models tend to apply conservative estimating approaches and tend to overestimate actual ambient concentrations to levels that no one will likely ever actually encounter as they are not adjusted for actual

exposure potential. The factors and approaches proposed in the rules to determine the maximum ambient concentration (Max_{Conc}) are very conservative, yielding results that should be well below any expected actual ambient concentrations. In addition, the proposed treatment of "intermittent emissions" is inappropriate as truly intermittent emissions could be below 10 percent of the maximum hourly rate. As the focus is on chronic effects which correlate better to annualized emission rates, annualizing intermittent hourly emission rates is appropriate regardless of how much lower the resultant "hourly" emission rate would become compared to the maximum actual hourly rate. Given the conservativeness built into the first 3 tiers, it would be expected that many facilities will have to undergo the thorough modeling of Tier 4 to better estimate potential Max_{Conc} levels. In addition, considering the conservativeness of the modeling, a comparison may be needed to better align modeled results with monitored emission concentrations. Additional adjustment should be provided where the modeling is shown to exaggerate the Max_{Conc}.

Regulation 5.23 Categories of Toxic Air Contaminants

No additional comments.